

# SOLON<sup>®</sup> NV

Roped Machine Roomless Elevator

Space savings  
Energy savings  
Ride comfort  
Environmental sensitivity



Your Elevator Partner... SIGMA

# SIGMA

## Reaching new heights



### Korean Engineered Products

Sigma products are engineered by highly qualified Korean and Chinese engineers thereby ensuring customers receive excellent products with reliable quality.



### Aesthetics Design Excellence

Sigma's design centers in Korea and China are staffed with professionals who continue to pursue ideal aesthetic designs to satisfy customers needs.



### Global Network

Sigma has served customers in more than 60 countries over the last 45 years.





Sigma has exported over 100,000 elevators worldwide since 1978

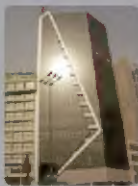
● SIGMA SUBS ● DISTRIBUTORS



Khalid Al Attai Tower  
UAE



Al Rames Tower  
Qatar



Darwaza Tower  
Kuwait



Vorobievsky Gory  
Russia



Triumph Palace  
Russia



Antel  
Russia



Sheraton Hotel  
Puerto Rico



Baiyoke Tower  
Thailand



Grand Hyatt Hotel  
Indonesia



Emerald Tower  
Kazakhstan



LG Beijing Tower  
China



Juma al Majid  
Tower  
UAE



Armada Tower  
UAE



Rostonskaya  
Russia



Shangri-La Hotel  
Mongolia



Plaza La  
Castellana  
Venezuela



Torre  
Global Bank  
Panama



Ocean  
Two  
Panama

# SOLON<sup>®</sup> NV

Roped Machine Roomless Elevator

Innovative mid-rise elevator with a highly efficient and compact PMSM gearless traction machine







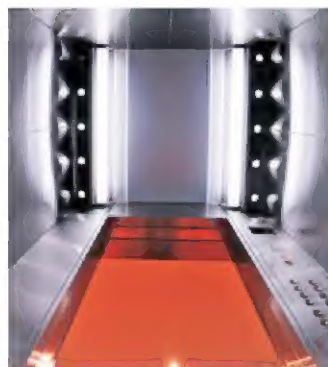
## Space saving

Scientific hoistway layout provides smaller hoistway size and class leading buffer height, pit depth and top storey space effectively utilizing the building space.



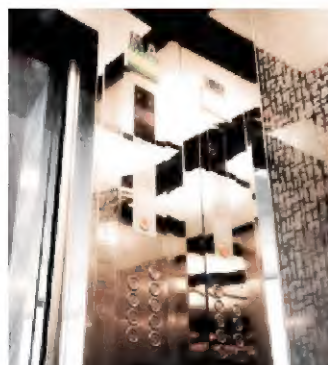
## Intelligent design Easy maintenance

The main components of the Solon NV are installed in the hoistway where the traction machine is installed on a hoistway beam. The integrated controller is installed outside the landing door at the top floor for easy maintenance and inspection.



## Reliable quality Upgraded safety High performance

In addition to energy and power savings, Sigma also applies multiple advanced technologies to upgrade safety of the Solon NV. From the start of the product development, Solon NV has followed a strict design philosophy. All safety components have passed E3 certification.



## Environmental sensitivity

As global building design increasingly emphasizes environmental sensitivity, Sigma is focused on manufacturing products that better meet customer needs.

## Space saving

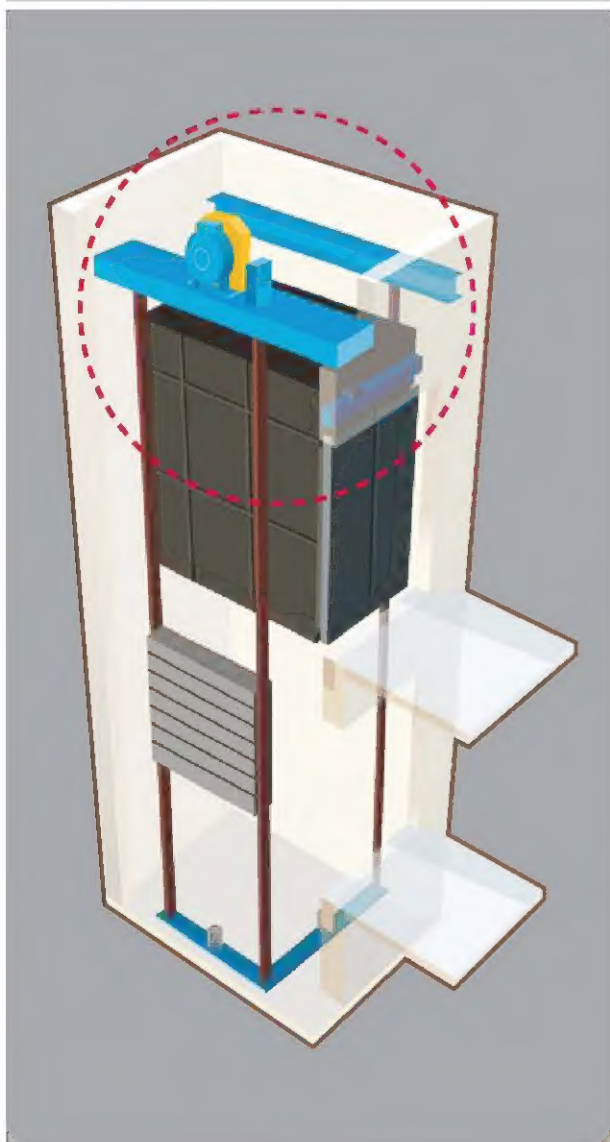
Solon NV creates possibilities in limited building space, saving space and construction costs. Compared with other MRL elevators, Solon NV offer better quality and performance in terms of safety, reliability, energy savings and ride comfort.

### Coverage

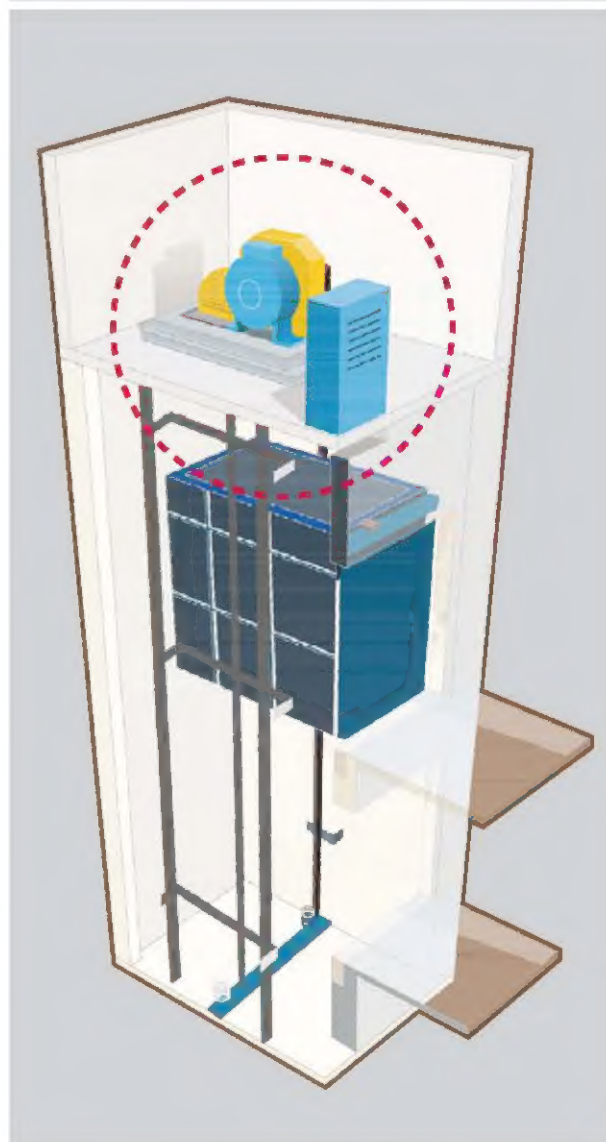
1.0 ~  
1.75m/s  
Speed

450 ~  
1000kg  
Duty

up to 32  
stops  
Stops



Solon NV



Traditional Elevator

# Energy saving Environmental protection

A permanent magnet synchronous gearless elevator traction machine is used in the Solon NV with drive efficiency of up to 90%, which increases the operating efficiency and saves energy. No lubricating oil is required which helps to reduce oil pollution. The Solon NV adopted advanced control technology with an integrated controller which saves energy and building space. The SIN/COS speed encoder offers high flexibility, accurate leveling and smoother elevator braking, thus improving ride comfort for customers.

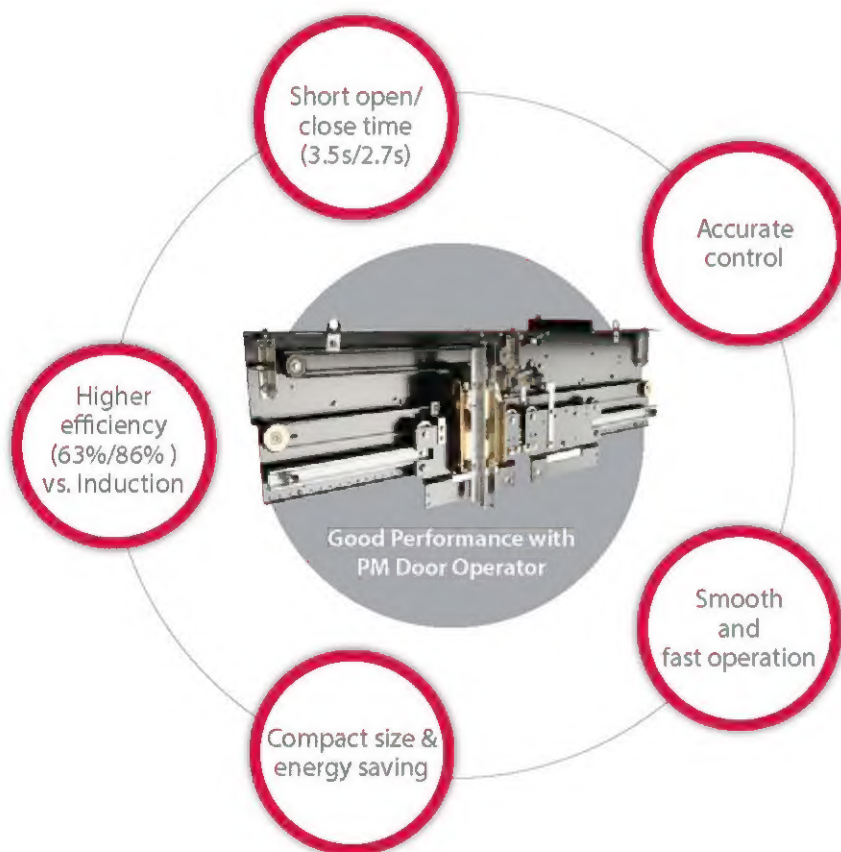




# Reliable quality

## Upgraded safety

By strictly complying with the highest safety standards, the Solon NV ensures passenger safety. The Solon NV is equipped with 11 different elevator safety components, such as protection device for light curtain, secure identification device, overload protection device, protection device for end station and man-machine interaction device. All safety devices have passed E3 global product safety certification.








## Car Design | Standard



### Specification

Ceiling	C-RL02
COP	CBL-85C-N
Car Door	Stainless steel HL
Car Wall	Stainless steel HL
DECO Floor	DE313

 The actual product can be different (changed) depending on design  
Car wall image can be different (changed) depending on capacity




## Car Design | Standard



### Specification

Ceiling	C-NL02
COP	CBL-85C-N
Car Door	Stainless steel HL
Car Wall	Stainless steel HL
DECO Floor	DE103

 The actual product can be different because it depends on the size.  
Car wall image can be different (change) depending on the capacity.

## Car Design | Luxury



### Specification

Ceiling	C-LA01
COP	CBL-85C-N
Car Door	Mirror Etching EH1-085
Car Wall	Mirror Etching EW2-085
DECO Floor	DT01

! This is a preliminary rendering. The final design may vary.




## Car Design | Luxury



### Specification

Ceiling	C-LN01
COP	CBL-85C-N
Car Door	Mirror Etching EH1-086
Car Wall	Mirror Etching EW2-086
DECO Floor	DT03

 The actual product can be different (changed) depending on design  
Car wall image can be different (changed) depending on capacity

## Fixtures | Standard

### | Car Operation Panel



CBX-22C



CBL-82C

### | Position Indicator



HIX-A162



HIX-C162

### | Hall Button



HBM-R45

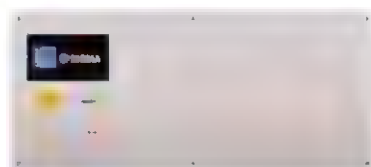


HBM-RA55



VIX-M652

### | Handicapped COP



CBM-44SH



## Fixtures | Optional

### | Car Operation Panel



### | OPB



### | Position Indicator



### | Vertical Hall Indicator



### | Hall Button

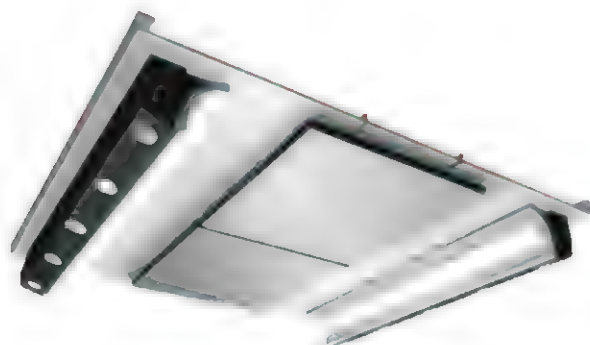


### | Handicapped COP

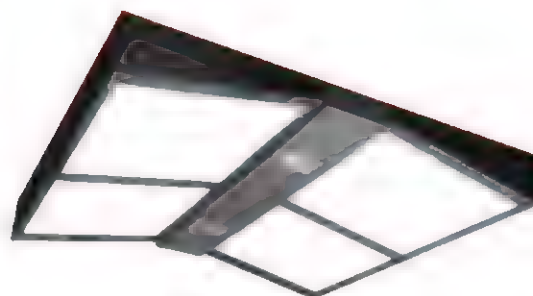


## Fixtures

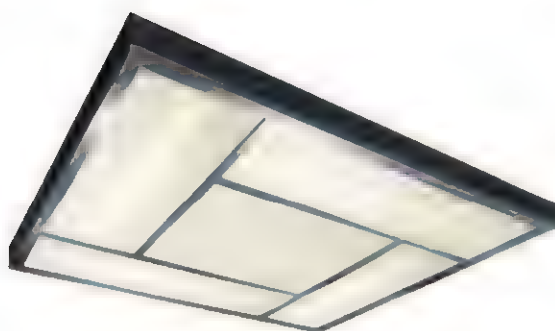
### | Ceiling



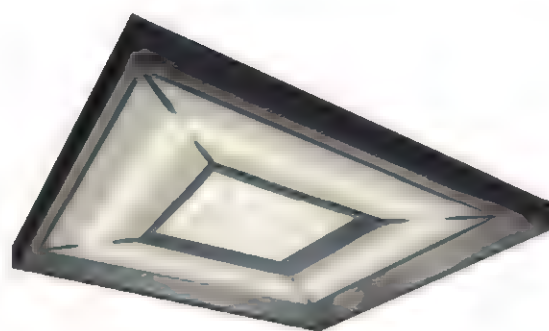
C-RL02



C-NL02

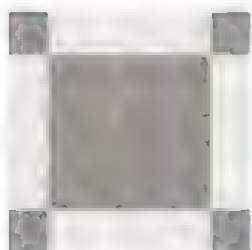


C-LA01 [LED]

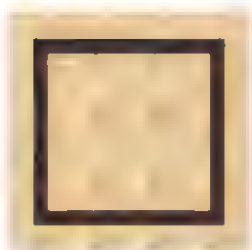


C-LN01 [LED]

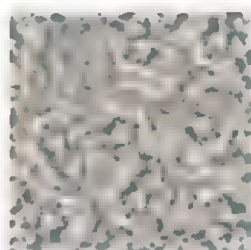
### | DECO Floor



DT01



DT03



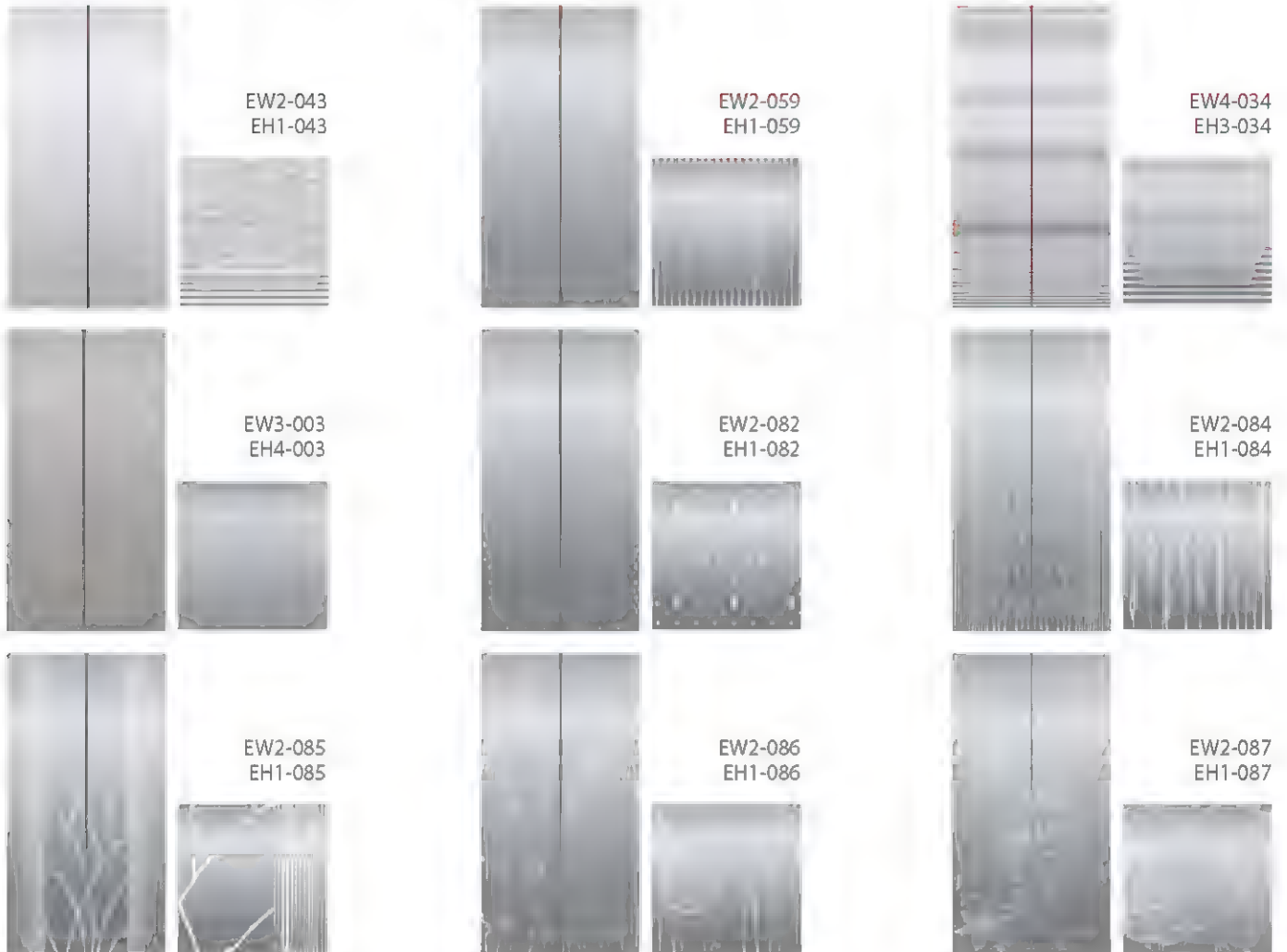
DE313



DE103



## I Etching Pattern



## I Painting



## Entrance Design



**A** (Wide Jamb)

Landing Door	STS HL etching EH1-067 (Stylish)
Position Indicator	HIL-A193
Hall Button	VIL MBB2SN



**B** (Narrow Jamb)

Landing Door	STS HL etching EH1-063 (Luxury)
Position Indicator	HIL-C193
Hall Button	HBM RBBS



**A** (Wide Jamb)

<b>Jamb Finish</b>	Stainless Steel Hairline Finish
<b>Door Finish</b>	STS HL etching EH3-034
<b>Hall Button</b>	VIX-M652



**B** (Narrow Jamb)

<b>Jamb Finish</b>	Stainless Steel Hairline Finish
<b>Door Finish</b>	Stainless Steel Hairline
<b>Hall Button</b>	VIX-M652





## I Shaft size table

Speed (m/sec)	Load (kg)	Travel (m)	Overhead (mm)	Pit (mm)	Hook Load (Kg)
1.0	450/550/630/800/1000	TR ≤ 80	3750	1350	3000
1.5	450/550/630/800/1000	TR ≤ 80	3900	1450	
1.75	450/550/630/800/1000	TR ≤ 80	3950	1500	

Speed (m/sec)	Person	Load (kg)	OP (mm)	Car Size(mm) CWxCD	Hoistway Size(mm)	
					Simplex HW X HD	Duplex HW X HD
1.0/1.5/1.75	6	450	700	1100*1100	1800*1800	3800*1800
	7	550	700	1100*1200	1800*1800	3800*1800
	8	630	800	1100*1400	1850*1850	3900*1850
	10	800	800	1350*1400	2000*2000	4200*2000
	13	1000	900	1600*1400	2200*2000	4600*2000

## I Power Reference Table

Speed (m/sec)	Person	Load (kg)	Motor Capacity (kW)	Transformer Capacity (kVA)	MCCB Capa (A)	Lead-in Wire Size (mm <sup>2</sup> )		Earth Wire Size (mm <sup>2</sup> )		Thermal Losses (kcal/hr)	Starting Power (kVA)
						Simplex	Duplex	Simplex	Duplex		
1.0	6	450	4.5	4.6	25A	6	6	6	6	675	8.8
	7	550	4.5	4.6	25A	6	6	6	6	825	9.9
	8	630	4.5	5.5	25A	6	6	6	6	900	10.6
	10	800	5.5	5.5	25A	6	6	6	6	1200	14.8
	13	1000	6.7	6.7	25A	6	10	6	10	1500	16.3
1.5	6	450	6.8	6.9	25A	6	10	6	10	1013	14.5
	7	550	6.8	6.9	25A	6	10	6	10	1238	16.2
	8	630	6.8	8.3	25A	6	10	6	10	1350	17.3
	10	800	8.3	8.3	32A	10	10	10	10	1800	22.5
	13	1000	10	10.0	32A	10	16	10	16	2250	24.8
1.75	6	450	7.9	8.1	25A	6	10	6	10	1181	17.5
	7	550	7.9	8.1	25A	6	10	6	10	1444	19.6
	8	630	7.9	9.7	25A	6	10	6	10	1575	20.9
	10	800	9.6	9.7	32A	10	10	10	10	2100	27.2
	13	1000	11.7	11.7	40A	10	16	10	16	2625	29.9

# Technical Data

## I Function

● standard ○ option

Function	Description	
Automatic operation	Elevator operates automatically	●
Anti-nuisance operation	In case of a significant difference between the number of calls registered on the car operating panel and actual load in the elevator, the elevator prevents unnecessary operation by canceling all registered calls when it arrives at the nearest floor.	●
Car call cancellation	Allows cancellation of an incorrectly registered car call if a passenger accidentally push an incorrect button, the call can be cancelled by pressing the same button once more.	●
Nearest stop	When the car stops between the floors due to a mechanical malfunction, it will move to the nearest floor to enable passengers to exit safely.	●
Automatic door open & close time adjustment	Door open and close are automatically adjusted depending on whether it is a hall call or a car call, increasing the operating efficiency.	●
Car door safety shoe	Extending the full height of the car door, this device enables the doors to return to the fully open position, should the door encounter a person or obstacle while closing.	●
Automatic car light & fan switch	Car illumination and fan are turned off automatically to save energy.	●
Bypass operation (80%)	If the actual load exceeds 80% of the allowable maximum load, the elevator will not react to calling signals from other floors.	●
Over load (110% of rated load) holding stop	When the load of passengers exceeds the maximum capacity, a buzzer will activate and the elevator remains at that floor. When passengers step out of the elevator, the buzzer will stop and the elevator doors will close and operation continues.	●
Car position display	Car position display in car or hall, operated by car indicator or hall indicator.	●
Over speed governor	Located at the top of the hoistway, engages the governor rope, and helps activation of the elevator safety device, should the elevator car accelerate beyond the predetermined maximum speed for both "up and down" direction.	●
Emergency lighting feature	In case of power failure, the emergency light will be turned on and the light will maintain on for certain period of time	●
Changeable reference floor	The reference floor can be changed by the customer.	●
Inspection mode	When checking and repairing, the elevator will operate at a lower speed as to ensure technician's safety.	●
Terminal limit switches	Prevents the elevator from traveling beyond a terminal landing.	●
Intercom	Provides emergency communication between passengers in the car and the machine room or the building personnel in a security or maintenance room.	●
Car chime	Arrival signal	●
Duplex	2 Unit duplex control	○
Firemen Operation	In case of fire, firemen can use the elevator which is stopped at the specified floor in order to support fire-fighting.	○
Fire Return Operation	In case of fire, every car will return to the specified floor to evacuate passenger safely.	○
Automatic Rescue Device	In case of power failure, when the building has no emergency power supply, the elevator is sent to the nearest floor by DC power battery to prevent passengers from being trapped inside the car.	○
Supervisory Interface	Provide dry contact (BA Interface)	○
Earthquake Sensor	When earthquakes occur, the device will force the elevator to stop at the nearest floor with door fully opened, and the elevator will stop operating. The elevator will not operate until reset.	○
Voice Synthesizer	Automatic broadcast of status information of the elevator.	○
Night Noise Restriction	When a timer or RTC (Real Time Clock) reaches designated time, chime and/or gong is deactivated.	○
CCTV	Provide CCTV signal from car to supervisory room. Customer provides CCTV equipment and CCTV cable from machine room to supervisory room. Sigma provides CCTV cable from car to controller and hole position of CCTV equipment on ceiling.	○



Reaching new heights

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Roped Machine Roomless Elevator



Reaching new heights



ISO 9001  
Certificate



ISO 14001  
Certificate



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**SIGMA**

Your Elevator Partner  
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Sigma constantly endeavors to improve products. Please note that the information in this catalog is subject to change without prior notice.  
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